



## DEPARTMENT OF THE ARMY

U.S. Army Corps of Engineers  
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WASHINGTON, D.C. 20314-1000

REPLY TO  
ATTENTION OF:

CESO-ZA

23 October 2011

### MEMORANDUM FOR MSC/ DISTRICT CHIEFS OF SAFETY AND USACE – OWNED FACILITY AND RESOURCE MANAGERS

SUBJECT: Hazard Marking Guidance for Roadway Gates on USACE Property.

1. A closed gate across a road is a potential hazard to moving vehicles, bicycles, and possibly pedestrians. Vehicle drivers must be able to see that there is a closed gate ahead and have adequate recognition and stopping distance to avoid hitting the gate. Due to questions raised by the USACE Sign Standards Committee and field personnel, CESO and CECW personnel have developed this guidance to clarify the marking requirements for road closure gates on USACE parks and property. This particular guidance is for swinging gates; rolling chain-link gates are addressed in Reference d. below. Gates are the only acceptable movable closure; chains, cables, and wire rope are prohibited on roads used by the public.
2. References.
  - a. EP 310-1-6a & b; USACE Sign Standards Manual
  - b. EM 385-1-1; USACE Safety and Health Requirements Manual
  - c. 23 CFR 655, Subpart F—Traffic Control Devices on Federal-Aid and Other Streets and Highways
  - d. Federal Highway Administration Manual of Uniform Traffic Control Devices (MUTCD, rev 2009)
3. 23 CFR 655.603 adopts the MUTCD as the national standard for all traffic control devices installed on any street, highway, bikeway, or private road open to public travel. When a State or other Federal agency manual or supplement is required, that manual or supplement shall be in substantial conformance with the National MUTCD. The MUTCD states that "All regulatory and warning signs installed on public roads and streets within recreational and cultural interest areas shall comply with the requirements of Chapters 2A, 2B, 2C, 7B, 8B, and 9B." The MUTCD definition of a public road is "Any road, street, or similar facility under the jurisdiction of and maintained by a public agency and open to public travel."
4. The USACE Sign Standards Manual EP310-1-6a on page 9-1 states that "The Manual on Uniform Traffic Control Devices for Streets and Highways (MUTCD) has been adopted as the standard for all Regulatory and Warning signs used on Corps project roadways for vehicular traffic."
5. While this guidance is intended to describe the minimum acceptable standards for marking roadway gates on USACE properties, the MUTCD encourages decisions concerning a particular traffic sign to be determined using engineering judgment or an engineering study.
6. Gate Marking Guidance:

SUBJECT: Hazard Marking Guidance for Roadway Gates on USACE Property.

a. Roads Open to Public Travel

i. Through Roads, Extensions of Federal, State or County Roads; When such roads exist on a USACE property, gates closing traffic to these roads must meet the specific requirements of MUTCD Section 2B.68., 2C.36-39, and 6F.17. This includes marking the gates (red and white reflective material-paint, tape, etc- on the arms), marking gate stanchions (yellow Type 2 Object Markers), a ROAD CLOSED sign or Type 4 red Object Marker, and possibly providing an Advance Warning Sign ahead of the gate. Refer to Enclosure 1 for specific requirements.


ii. USACE Roads Approved for Public Use: Access Roads, Campground Roads, Scenic Roads, etc; These gates must technically meet the same MUTCD requirements as those in the preceding paragraph, however the local project may use the standards and engineering analysis to develop modified markings based on local factors to include: the design of the gate, potential speed of approaching vehicles, available stopping sight distance, and visibility of the gate and surrounding area at night. Gates that occur along the length of a roadway or at a no-stop intersection should meet all MUTCD requirements if possible. For gates at stop-signed intersections or occurring at an exit off a main route, the minimum recommendation is that the top horizontal bar of the gate be covered end to end with red and white retroreflective material and the stanchions marked with yellow reflective material or Type 2 Object Markers. The use of advance warning signs and Type 4 Object Markers should be decided based on the speed limit, visible distance to the gate while driving, and other factors that make the gate less visible. Refer to Enclosure 2 for further guidelines.

b. Roads Not Open to the Public – USACE access roads, service roads, etc.; Where these roads connect to a through road or public use road, the initial gate should meet the requirements of those public roadways. Internal gates within public vehicle-restricted areas should be marked appropriately with reflectors or reflective tape so that they are readily identifiable while work is performed. Roadways not approved for standard vehicles may be authorized for recreational vehicles (ATVs, snowmobiles, bicycles, etc.); these gates should meet the guidance in paragraph ii, modified as needed by an engineering analysis.

7. These guidelines are intended to bring some standard of uniformity to USACE road gates and to require those that fall under the MUTCD to have appropriate markings. USACE managers should evaluate their properties' gates along these guidelines and establish a plan to bring their gates into compliance, beginning with the highest risk. New or replacement gates installed after the date of this memo shall follow these marking guidelines.

8. The HQUSACE Point of Contact for this issue is Karl Anderson, 202-761-8567.

ENCLs

  
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## Enclosure 1

Markings for MUTCD Compliant Gates: permanently installed gates that control through roads, extensions of Federal, State or County roads.

Also recommended for gates on USACE roads that occur along the length of a roadway or at a no-stop intersection where traffic would be expected to be at the speed limit when meeting the gate.

### Marking:

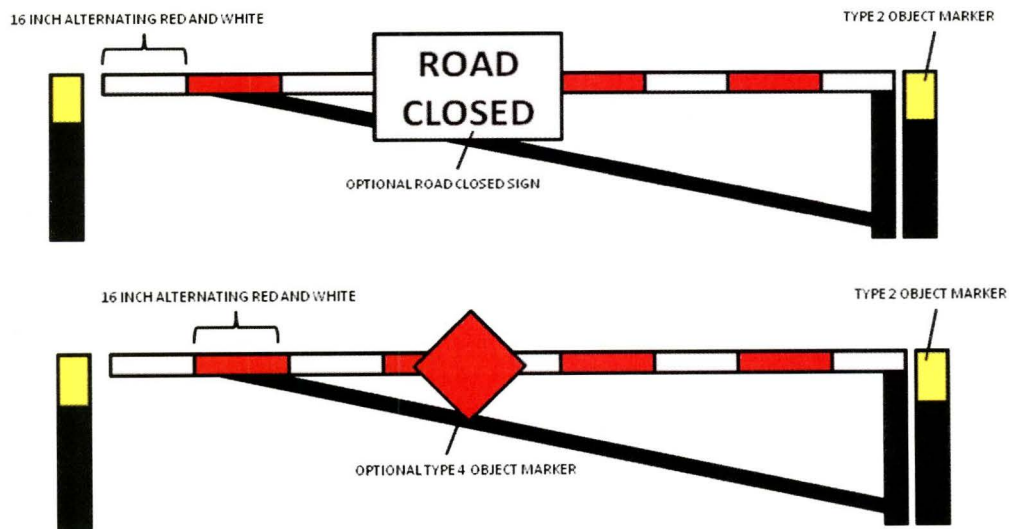
Gate arms shall be fully retroreflectorized on both sides, have vertical stripes alternately red and white at 16-inch intervals measured horizontally. If used on a one-way roadway, the retroreflectorization may be omitted on the side of the gate facing away from approaching traffic.

The gate shall also have either a Type 4 Object Marker (red diamond) or Road Closed sign attached.

Rolling sections of fence, if used as gates, shall include either a horizontal strip of retroreflectorized material on both sides of the fence with vertical stripes alternately red and white at 16-inch intervals measured horizontally to simulate the appearance of a gate arm in the horizontal position and one or more Type 4 object markers. The bottom of the retroreflectorized area shall be located 3.5 to 4.5 feet above the roadway surface.

Gate stanchions or any fixed structure within 8 feet of the roadway shall have Type 2 Object Markers (Yellow reflectors). Gate stanchions and the gate arm, when open, shall be at least 2 feet from the edge of the paved road surface.

Basic appearance of MUTCD-compliant gates:



## Enclosure 1 Cont'd

### Advance Warning Signs

Advance Warning Signs are required for gates that can close through roads and extensions of Federal, State or County roads.

The time needed for detection, recognition, decision, and reaction is called the Perception-Response Time (PRT). This helps establish the distance ahead of the gate that a warning sign should be placed, based on the speed limit and visibility of the gate.

MUTCD Table 2C-4 should be used as an aid for determining warning sign location. The distances can be adjusted for roadway features, other signing, and to improve visibility. The distances are for guidance purposes and should be applied with engineering judgment. Warning signs should not be placed too far in advance of the condition, such that drivers might tend to forget the warning because of other driving distractions.

Signs warning of closed gates should read "ROAD CLOSED AHEAD" and can be permanently fixed or only placed when the gate is closed. Permanently fixed signs should be provided with a cover or be of the folding type so that they cannot be read when the gate is open.

## Enclosure 2

Minimum recommended marking requirements for gates on USACE roads open to the public, when not occurring on the length of a road or at a no-stop intersection.

The purpose is to make the gate visible when they encounter it. Type 4 Object markers and Road Closed signs would generally be unnecessary on most USACE roads, given the low speeds and placement of the gates at turn-off entrances.

